ship, Houghton County; near St. Ignace, in Moran Township, Mackinac County; near St. James, in St. James Township, Charlevoix County; near Escanaba, in Escanaba Township, Delta County; near Houghton, in Houghton Township, Houghton County. No damage reported at any of these places.

September 13.—Hail occurred near Alpena, in Sanborn Township, Alpena County; near Benzonia, in Benzonia Township, Benzie County; near Frankfort, in Frankfort Township; near Munising, in Munising Township, Alger County; damage not reported. In Old Mission, Grand Traverse county; Sheridan Township, Huron County, damage $450.

September 14.—Hail was reported near Omer, in Arenac Township, Arenac County.

551.578.7 (763)

HEAVY HAILSTORM AND LOCAL SQUALL AT NEW ORLEANS, LA., WITH A SUMMARY OF THE PREVIOUS RECORDS OF HAIL

By R. A. DYKE, Meteorologist

[Weather Bureau Office, New Orleans, La., April 20, 1924]

A thunderstorm passed over New Orleans, La., on April 17, 1924, attended by a violent wind squall and a remarkable heavy fall of hail, which has led to an examination of the record of hail at this station.

Hail has fallen in New Orleans or its immediate vicinity about once a year, on the average. About 70 per cent of the occurrences of hail have been during the five-month period, March to July; January and February contribute 20 per cent, leaving 10 per cent equally divided among the remaining months except October, which has thus far no recorded occurrence of hail at New Orleans. The period of most frequent thunderstorms, embracing the summer months, is not the time of most frequent occurrence of hail in this locality. A total of 13 hailstorms has been recorded for the five months, May to September, while 18 have been recorded in March–April.

No hailstorms have been recorded at New Orleans for the morning hours between 4 and 8 o'clock, this being the time of day least favorable for the occurrence of thunderstorms. The apparent explanation for this fact is that cooling of the air nearest the ground at night opposes upward convection, so that traveling convective storms, which usually develop several hours earlier, generally exhaust their energy before early morning; and thunderstorms can not usually build up to any great height under the conditions prevailing from 4 a. m. to 8 a. m. It requires a well-developed thunderstorm to produce a fall of hail. It is interesting to note that 60 per cent of the recorded occurrences of hail in this locality have been between noon and 7 p. m. and 40 per cent from 7 p. m. to 4 a. m. A few occurrences of light hail were probably overlooked at night because comparatively few people are awake during certain hours, but in a large city the percentages given could not be much in error from this cause. Only a few of the recorded hailstorms were heavy and damaging, and these occurred late in the afternoon or early in the night and during the spring months.

Previous to the recent storm, the heaviest falls of hail in New Orleans occurred on April 16, 1879, and March 17, 1904; but these were far less heavy and damaging than the hail of April 17, 1924.

In the evening of April 17, 1924, an hour previous to the storm a narrow and rather shallow trough of low pressure was passing the station, with barometer reading of 29.81 inches, sea level, at New Orleans at 7 p. m. The temperature difference in the front and rear of this trough was slight at the earth's surface; the thermograph trace shows a fall of only 5° F. from before the storm to about an hour after. At the Weather Bureau office, which is near the southern limit of the path of hail, there was less indication of disturbed pressure conditions than is registered with many mild thunderstorms. The pressure rose at a moderate rate and apparently continuously, with only a very slight increase in the rate of rise at the time of the storm. Thunder and lightning of a mild character occurred in the neighborhood of the office. The maximum recorded wind velocity was 18 miles an hour at 8:15 p. m. to 8:20 p. m. and scattering hail fell from 8:10 p. m. to 8:15 p. m., the hailstones being 2 inches in diameter or somewhat larger.

The path of the hail was about 6 miles wide and 25 miles long. Hail began just east of Kenner, La., shortly before 8 p. m. and passed rapidly eastward as far as Chef Menteur, lasting not more than 5 to 10 minutes at the various places along the path. The entire city of New Orleans, except the extreme southern portion where the river bends to the south, was in the path of the hail, and numerous reports were received of the hailstones fully 3 inches in diameter. In a few places the hail on the ground was reported to be 4 inches deep, impeding the advance of an automobile at North Broad and St. Bernard Streets. Many buildings have a spotted appearance on the west side, showing where the paint was knocked off. Damage of about $7,000 was done to glass and plants of florists and in gardens. Other damages, difficult to estimate, resulted from broken windows in dwellings and other buildings; but the path of such damage was considerably smaller than the path of the hail.

The central part of the front of the thunderstrom was marked by a wind squall from the west-northwest, which reached almost tornadic force in the extreme western portion of the city and the adjoining suburbs near the upper protection levee. Numerous small houses were moved from their foundations, and several lightly built houses were scattered and destroyed. The roofs of many other houses were damaged, giving entrance to heavy rain, which increased the damage. The total losses from wind and rain may be conservatively estimated at $100,000.

The most serious injury reported was a fractures leg, suffered by a woman in a house which was blown to pieces. Lesser injuries, due to wind or hail, occurred to about 50 other persons. To persons who viewed the wreckage, it appeared remarkable that there were no deaths or no worse injuries than occurred.

SEVERE HAILSTORM AT CORPUS CHRISTI, TEX.[1]

The most severe hailstorm that has visited the immediate vivinity of Corpus Christi occurred between 1:10 and 2 a. m., May 10. Hail, averaging a half inch in diameter, fell nearly continuously for almost an hour, associated with strong north winds, vivid lightning, and torrential rainfall (1.65 inches in 38 minutes).

The greatest damage was sustained in Corpus Christi; one greenhouse was completely destroyed, as if riddled by buckshot; dwelling houses on Nueces Bay Heights suffered loss and damage through breaking of windows and flooding of the interior by the rain. The total loss from the storm is estimated at $15,000.

The path of the storm was a mile wide and 6 miles long. The intensity of the storm decreased very much as it moved west of Nueces Bay Heights.

[1] Condensed from a report by J. P. McAuliffe, Meteorologist.